

PUBLIC MEETING FOR WASTE AREA GROUP 2
TEST REACTOR AREA PROPOSED PLAN

Boise, Idaho
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1 BOISE, IDAHO, WEDNESDAY, MARCH 26, 1997

2
3 MR. SMITH: We just have a general
4 announcement to make. It's seven o'clock, time to
5 start our public meeting. In talking with the
6 agencies and our visitor, our guest, we've decided
7 to wait ten minutes and see if other members of the
8 public show up for the meeting, and we will begin
9 at that time. Are there any general questions
10 about that? So we're on hold.

11 (Off the record.)

12 MR. RECTOR: I guess Reuel would
13 like to get the meeting started. Nancy is pushing
14 her fingers back and forth, so we'll go ahead and
15 get started.

16 I would like to welcome you tonight.
17 My name is Steve Rector, for the couple of those
18 that I didn't get an opportunity to meet. I manage
19 the Boise LMITCO INEEL office.

20 I want to just take a couple minutes
21 tonight to let you know that the office is
22 functioning here in Boise. We're at 805 West
23 Idaho. I gave you all an address card. The
24 landmark to identify that is the old Boise National
25 Bank building, where Doughty's is downtown. We're

1 on the third floor of that.

2 We welcome you to come and visit
3 us. We have a public reading library room that is
4 open for the public, resources from INEEL and other
5 sites, and those resources that we have involve
6 videos and a clipping service that we keep and
7 other information that you might like to use or
8 have access to here in Boise. So we're there to do
9 that. We serve all the stakeholders, which include
10 the state folks, businesses, teachers, education
11 community, all those who want information about
12 what is going on with the Lockheed Martin site.

13 We're the link between the site and
14 the state government. Our office works very
15 closely with all the state agencies, the governor's
16 office, attorney general's office, all the
17 congressionals here in Boise and back in D.C., with
18 our Washington operations also.

19 With that we, again, would like to
20 have you drop by or call the office, if you have a
21 need for us to be of service to you. That is what
22 we're here for. With that, I would like to
23 introduce Reuel Smith, who is going to moderate the
24 meeting tonight.

25 MR. SMITH: Thank you, Steve. We

1 should express our appreciation to you and Andrea
2 for being here tonight. I think it's great for
3 people to know there are resources in this area
4 where they can go to immediately to get information
5 about activities at INEEL.

6 MR. RECTOR: I apologize, I forgot
7 to introduce Andrea. Andrea is one of the staff
8 people at the office.

9 MR. SMITH: I would like to just
10 review real quickly what the purpose of tonight's
11 meeting is. There are really three purposes for
12 being here tonight. We have summary information
13 that we would like to present to you.

14 Here is a copy of the investigation
15 that has taken place at this facility and this
16 Waste Area Group. Tonight's presentation is
17 really a high-level summary of that study and
18 investigation. After we present this information,
19 we would like to open the floor for questions. We
20 will have a question/answer session. And there
21 will be a time tonight when we would actually ask
22 any of those present if they would like to give
23 comments for the record. It's possible that other
24 citizens may come into the meeting a little later,
25 so we will be here to take their comments.

1 In discussing the proposed plan for
2 Waste Area Group 2, this is the first of eight --
3 actually nine, the first of nine comprehensive
4 investigations that will be released to the public
5 for comment. This is just an overall schedule of
6 what citizens can expect in the future. We have
7 four other projects that will be going out for
8 public review later this year and early 1998. We
9 have three in 1999 and one final comprehensive
10 investigation of the entire site that will be
11 concluded some time in the year 2000. That will be
12 going out for public review.

13 So we're excited about the
14 opportunity to communicate the results of the
15 investigations to the public. We have a display
16 over here that summarizes the activities that have
17 occurred in each of these ten Waste Area Groups at
18 the site. So if you're aware of any groups that
19 would like to have access to this information, we
20 would be glad to send it and set it up for their
21 use.

22 I'd like to just make a note that in
23 preparation of this proposed plan that is being
24 discussed tonight, the three agencies convened a
25 focus group of citizens who came together to review

1 our information, discuss ways of improving
2 community relations. And we have a member of that
3 citizen's group with us tonight, Mr. Don Howard.
4 We would just like to express our appreciation to
5 you and to your wife and to the other focus group
6 members who participated with us in reviewing the
7 document.

8 I think I would like to turn the
9 time over to Nolan Jensen at this time to introduce
10 those that are accompanying him from the Department
11 of Energy and Lockheed Martin, and then we would
12 ask Jean Underwood from the state of Idaho if she
13 would like to introduce those with her and make a
14 statement on behalf of the state. So, Nolan.

15 MR. JENSEN: Thank you, Reuel.
16 Again, thank you for coming. And, probably,
17 tonight I would suggest that since we have so few
18 of you, that if you have questions, we can be
19 really informal and just ask them as we go.

20 I'm here as kind of two roles, I
21 guess. One is I'm manager right now of the
22 Environmental Restoration Program, and I also got
23 to work on this project. From the DOE side,
24 Adam Owen who is going to present tonight was the
25 main project manager for Lockheed. Doug Burns and

1 John Keck did a lot of work for him. And just glad
2 to have it done. It's actually kind of fun to go
3 out and talk about it now.

4 Let me turn the time over to Jean
5 Underwood from the State. Rick Poeten, who is
6 project manager from EPA, attended our meeting in
7 Idaho Falls last night but wasn't able to come
8 tonight. So Jean can speak for both of them,
9 right?

10 MS. UNDERWOOD: I'm the state
11 of Idaho's Waste Area Group manager for the
12 Test Reactor Area. I should mention, with me this
13 evening is Dave Hovland, who is the Federal
14 Facility Manager with the state of Idaho. And, in
15 fact, Dave who was one of, I guess, my predecessors
16 on the TRA project from some of the earlier stages
17 and from some of the earlier decision points that
18 were made.

19 Although, as Nolan mentioned,
20 Rick Poeten with EPA is unable to be here with us
21 this evening. One of the things that he did
22 emphasize at yesterday's meeting that was in
23 Idaho Falls was that really this has been a
24 collaborative effort amongst the three agencies:
25 DOE, EPA and the state of Idaho. And on the

1 state of Idaho's behalf, I would like to affirm or
2 express our agreement with that statement and
3 to let you know that the state of Idaho does
4 believe -- that the Preferred Remedial Alternatives
5 in the proposed plan for the eight sites -- we
6 believe that those constitute the best overall
7 approach for those sites. And we also concur with
8 the No Further Action recommendation for the other
9 47 sites.

10 Now, granted, we have one individual
11 here this evening with us, but any comments that
12 you have as part of this process, what we will be
13 doing with those is we will be considering those,
14 and we will be using those as part of the final
15 decision making process for these sites at the
16 Test Reactor Area.

17 And I wanted to express that the
18 state really does value your input, and we'll just
19 encourage you with whatever thoughts or suggestions
20 that you would have, to go ahead and bring those
21 forth. I would also like to personally thank
22 you, Mr. Howard, for your participation in the
23 focus group. I thought that that was a very
24 worthwhile effort, and a lot of good comments and
25 suggestions came out of that. So with that, I'll

1 turn it back over to Nolan or Reuel.

2 MR. JENSEN: All right. Our goal is
3 to get this condensed down to 15 minutes. And
4 please, though, if you have any questions, anyone,
5 please stop me, and we'll talk about things if we
6 need to.

7 Tonight we're going to be talking
8 about the Test Reactor Area, which under our
9 agreement with EPA and the state for our Superfund
10 cleanup is Waste Area Group No. 2, south central
11 part of the INEEL.

12 This next slide is a picture of the
13 facility. Same one you'll see over here, so you
14 can kind of keep an eye over there as we're going
15 through this. The Test Reactor Area is about
16 a 70-acre facility. It had three major operations,
17 three major reactor operations. This is the
18 Engineering Test Reactor, Materials Test Reactor
19 and the Advanced Test Reactor. This is the only
20 reactor that is currently operating at the INEEL
21 right now. These two are both shut down.

22 It's an industrial facility, and we
23 have everything there that you have at many
24 industrial facilities, everything from underground
25 storage tank with oil spills, acid spills, a number

1 of small things. But because it's a reactor
2 operation, the larger concerns -- or biggest
3 contamination problems we have, are associated with
4 waste water disposal from the reactors.

5 As you can see here on this east
6 side of the facility there are a number of ponds.
7 This is a new lined pond. It's called the
8 Warm Waste Pond, where radioactive waste water is
9 disposed. It's now a lined evaporation pond that
10 came on line about three years ago. But before
11 that, all this water went into another pond that
12 was located right here. And it just seeped into
13 the ground.

14 Anyway, the next slide shows that we
15 had, in total, 55 sites that we looked at, and most
16 of them, as I mentioned, were fairly small, but we
17 do have these ponds on the east side that are
18 fairly significant concerns.

19 What I'm going to do now is show you
20 photographs of some of the sites. We have a number
21 of rubble piles, mostly just construction rubble.
22 We looked at those to make sure there was no
23 disposal of contaminants or hazardous wastes, but
24 that was the concern there, but we didn't find any
25 problems. But there are a number of rubble piles.

1 Here is a transformer that used to contain PCBs,
2 and there were four or five of those at the site.
3 Each of our sites, each of the 55 sites, are marked
4 with a little sign. That is all there is to see
5 here. It's not very photogenic, but this is a
6 location of an underground storage tank that has
7 been pulled. It's no longer there.

8 This was a tank that had water in it
9 that would have been treated. What they do is they
10 pump water out of the aquifer, and before they run
11 it through the reactor, they have to treat it,
12 basically, by taking out the ions. It's basically
13 a big water softener. Some of the brines, acids
14 and caustics were placed in that tank, and we
15 looked at that to make sure there wasn't leakage in
16 that tank.

17 This is the location of an old
18 loading dock. It's no longer there, as you can
19 see. But the concern there was that several of the
20 materials that were brought into the facility could
21 be a problem, such as solvents, paints, that kind
22 of thing. Then this is the cooling tower. Each of
23 the major reactors had a cooling tower associated
24 with it, and they used chromium in the cooling
25 tower as a rust inhibitor, and so we evaluated the

1 potential for problems from that. This is the only
2 cooling tower that still exists.

3 Then this last one, this is a valve
4 box where they brought in fuel oil and they hooked
5 the truck up to a valve in this little pit here,
6 and then it was pumped into a larger tank. But the
7 concern there was that over the years as they
8 brought fuel in that there would be leaks and drips
9 that could be a problem.

10 So what we have done over the last
11 several years since we signed the agreement with
12 EPA and the state is we did a number of preliminary
13 investigations and looked at all these 55 sites.
14 Most of them we found didn't require further
15 action, but there were two sites, or two general
16 contaminant issues that we have dealt with, and
17 I'll just summarize those really quickly.

18 One of those was this Warm Waste
19 Pond right here that I talked about earlier. That
20 is now replaced with the new lined pond. That was
21 used for disposal of radioactive waste water, and
22 millions of gallons a year went into that pond.
23 And as a result, as the water infiltrated into that
24 unlined pond, as it seeped down toward the aquifer,
25 which is about 480 feet, it would be interrupted by

1 these interbeds, these soil interbeds. Because of
2 it being slowed down, and this downward movement,
3 it created what we call a perched water body. So
4 we have a contaminated perched aquifer about
5 150 feet. We did an evaluation of that. We came
6 to the conclusion that no action needed to be
7 taken, but we are continuing to monitor it.

8 Then the other issue associated
9 with that pond, as well, because of the radioactive
10 waste water discharge, the sediments became
11 contaminated. And what we did three years ago was
12 move all of the sediments out of this cell,
13 consolidated everything into these two cells and
14 put a cover over it. This is a picture of
15 that operation when we were working on that
16 Warm Waste Pond.

17 The next one is a picture of the
18 monitoring of the perched water. This is one of
19 the monitoring wells right here. So out of all
20 that investigation and evaluation, out of the
21 55 sites, we have eight sites that we believe are
22 contaminated to the point where we need to take
23 some action.

24 I'll turn the time over to Adam, and
25 he'll talk a little bit about the risk assessment

1 that we went through to make the determination that
2 these are the sites that needed action.

3 MR. OWEN: We talked about this
4 slide. We grouped these into categories. We've
5 got disposal ponds as one category, which includes
6 the Chemical Waste Pond, the Sewage Leach Pond, the
7 Warm Waste and the Cold Waste Pond. Four ponds in
8 a category that we call disposal ponds. We've got
9 three other sites that are in the subsurface
10 release site category. It includes this site,
11 TRA-19, we call that the Hot Waste Tank Site; the
12 Brass Cap Area, and Tanks 1 and 2, also known as
13 TRA 50.

14 In these sites we have a number of
15 contaminants -- and I'll go into a slide that shows
16 a short list of what those contaminants are --
17 but, primarily, we're talking about metals and
18 radioactive contaminated soil. In the disposal
19 ponds, primarily, we have metals and radioactive
20 contaminated soil. The rest is, primarily, just
21 the radioactive component that we're concerned
22 about.

23 In addition to those, we've got a
24 groundwater site. Obviously, no one talked about
25 the perched water in the Snake River Plain

1 Aquifer. In that aquifer we have tritium and
2 chromium, then we have the No Action sites that
3 have been mentioned. Briefly we'll go into those a
4 little bit later, I think.

5 This slide shows a short list of
6 those contaminants that we feel have potential for
7 causing adverse health effects. We've highlighted
8 the ones that we're concerned most about those
9 effects, causing those effects, and you can see
10 cesium-134 and 137, mercury, cobalt-60, europium
11 isotopes are among that list.

12 In order to get a risk assessment
13 completed at a site, you've got to have -- or in
14 order to get a risk at a site, you have to have
15 three things: You have to have a contaminant
16 source, you have to have a way to get that
17 contaminate to somebody and then you have to have
18 somebody there to receive that exposure.

19 The way to get that contaminant to
20 somebody is called a pathway. For the purposes of
21 conducting a risk assessment, some various
22 scenarios are evaluated. But in general, the two
23 that are evaluated here were the occupational
24 scenario and the residential scenario. And I'll go
25 into that a little bit what that means later.

1 But the pathways that we talked
2 about include -- for both of those scenarios, it's
3 soil ingestion, dust inhalation, inhalation of
4 volatile organic compounds, direct radiation
5 exposure, skin contact. In addition to those, we
6 also evaluated some other pathways for just the
7 residential scenario, which include groundwater
8 ingestion, ingestion of homegrown produce.

9 Now, in a risk assessment, they call
10 it a baseline risk assessment. And the reason that
11 they do that is because the assumption that is made
12 is that if DOE were to walk away from the site
13 today and leave it as it is, what is the potential,
14 or what is the risk, to somebody who could go out
15 there and be adversely impacted by exposure to
16 these contaminants?

17 So the assumption is that DOE walks
18 away, the site is left as it is, and then we
19 evaluate, well, what happens if somebody were to
20 come in contact with that contaminated material?
21 If, through that evaluation, we show that there is
22 an unacceptable adverse impact, well, then we have
23 to do something about it.

24 The third risk assessment that was
25 done is an ecological risk assessment, which

1 evaluated the impact to ecological receptors if
2 they were to come in contact with any of these
3 contaminants at the site. It's part of a larger
4 study that is currently being conducted. And the
5 results of that aren't available at this time
6 because they are still in the middle of scoping
7 that out and getting ready to take samples this
8 coming field season. But in general, the objective
9 of that study is to identify across the INEEL as a
10 whole, and to ecological populations as a whole, to
11 any of the contaminants to not only this area but
12 other areas impact those populations.

13 After that risk assessment is
14 completed, a number is generated for each site.
15 That number is used to determine whether or not
16 that site poses an acceptable risk or unacceptable
17 risk to either of those receptors that I just
18 talked about, a resident or an occupational
19 worker.

20 If that number falls below this line
21 in this area, then that is considered an acceptable
22 risk. If after doing that risk assessment the
23 number falls in between this line and this line,
24 then that is also considered acceptable; however,
25 the agencies have the flexibility to evaluate other

1 considerations, which may end up in an action
2 actually being taken at that site. So there is
3 some flexibility in this range.

4 If that number shows that that site
5 risk is in this range above this line here, well
6 then, the guide tells us that is unacceptable and
7 that something must be done in order to remove that
8 risk or reduce that risk so that it is acceptable.
9 And you can see that, relatively speaking, TRA 19
10 and the Brass Cap Area, these two sites have the
11 highest risk for someone who is out there working
12 today if DOE was to walk away.

13 Obviously, DOE hasn't walked away,
14 and we're out there operating this facility. And
15 because of those operations, we have management
16 practices in place that prevent workers from being
17 exposed to these sites such that they would be at
18 risk.

19 But if DOE was to walk away and
20 somebody was to go out there and dig around, this
21 is the place they would not want to do that. They
22 wouldn't want to do it at either of these other
23 sites either; however, the relative risk at these
24 other sites are lower than this one.

25 This category here was put up here

1 just to show that today we have chromium and
2 tritium in the groundwater above drinking water
3 standards. Our modeling shows us that within
4 20 years through natural radioactive decay and
5 dispersion processes, those two contaminants will
6 be down to an acceptable level.

7 Another point I want to make about
8 our modeling effort, for all these sites that are
9 at the Test Reactor Area, we ran a computer model
10 to determine if we flush the water through these
11 sites, would the contaminants at the site reach the
12 aquifer? And we were very conservative in the
13 amount of water -- I think we used ten centimeters
14 per year, which is greater than the average
15 precipitation at the INEEL, and our modeling showed
16 us that wouldn't happen. Those contaminants just
17 wouldn't make it down the aquifer. That is
18 important to remember when I show you some of the
19 design schematics for some of these sites later on
20 in the presentation.

21 One hundred years from now were a
22 resident living out at the site, and we haven't
23 done anything out there today to clean up any of
24 these sites, if that were the case, these sites
25 would still be an unacceptable risk to those

1 residential people if they were to live at these
2 sites.

3 You can see that the other sites
4 over here are gone. The reason for that is because
5 the contaminants at those sites happen to be
6 radioactive contaminants, and within a hundred
7 years the radioactive decay will reduce the
8 concentration such that they fall below the line
9 and into the acceptable range. Again can you see
10 in a hundred years the groundwater will be below --
11 the concentrations will be below the drinking water
12 standards, so the groundwater will be fine.

13 There is another category of risk
14 that I want to talk about real briefly. Risk at
15 these sites could cause cancer, okay, due to
16 exposure to these contaminants. That in general is
17 what that risk assessment tells us: What is the
18 risk of somebody, perhaps, getting cancer?

19 There is also a potential for
20 somebody to not necessarily get cancer but to be
21 adversely impacted due to some contaminants, some
22 toxic contaminant that could make them very sick.
23 We have two sites that have contaminants in that
24 category, the Sewage Leach Pond and the Chemical
25 Waste Pond. And mercury is the contaminant of

1 concern there. So something will have to be done
2 to address noncarcinogenic hazards at those sites.

3 And Remedial Action Objectives guide
4 the decision makers into making decisions that will
5 satisfy our objective of being protective of human
6 health and the environment. So we have to have
7 some way to determine whether or not any action we
8 take at the site will keep us in the acceptable
9 risk range. Okay. These are the objectives that
10 have been established in this project.

11 Basically, we want to inhibit direct
12 exposure to the contaminants. We want to inhibit
13 ingestion of soil and groundwater. We want to
14 prevent anybody from being exposed to these
15 contaminants such that they would be in that
16 unacceptable range is the bottom line there. If we
17 were to implement some type of a cover design to
18 isolate these contaminants in any of these areas,
19 we would want to make sure that that cover
20 continues to remain effective for a period of time
21 such that the contaminants would no longer be
22 harmful.

23 For protection of the environment,
24 we want to inhibit adverse effects to plants and
25 animals. That is part of the ecological risk

1 assessment that we've done. For those sites that
2 the decision is made to leave contaminants in
3 the ground, we want to make sure that those
4 contaminants aren't migrating in such a fashion
5 that they could come in contact with somebody that
6 says that they are in that unacceptable range that
7 I showed you on the previous slide.

8 So through all this, I hope that
9 that answered the question of how bad of a problem
10 we have out there. That is the objective of my
11 presentation is to show you how bad is the
12 situation out there, and I hope that did that for
13 you.

14 Through the process we have
15 evaluated many alternatives of how we're going to
16 deal with this situation at these eight sites and,
17 basically, boil down those alternatives to these
18 five. The Feasibility Study in that big report
19 Reuel held up goes through a number of those
20 alternatives, but it boils down to these five.
21 All the alternatives were evaluated against this
22 criteria. We have evaluated these alternatives
23 against that criteria by law. We're at this last
24 point right here, community acceptance, so your
25 input is important.

1 Boiling down, we have No Action with
2 Monitoring; Limited Action; Containment and
3 Institutional Controls; Excavation, Treatment and
4 Disposal; and Excavation and Disposal. And the
5 next couple slides I will go into the details of
6 those.

7 No Action with Monitoring doesn't
8 have any actual physical removal of contaminated
9 soil or water. What it does have is monitoring of
10 air, soil and groundwater, at least annually for
11 the next hundred years. The Limited Action, or
12 what we also call Institutional Controls,
13 essentially, continues current practices that we
14 have in place at the site such as fences, access,
15 restriction, anything that we do now to protect the
16 workers or visitors at the site from coming in
17 contact with any of these areas.

18 Again, monitoring of the air, soil
19 and groundwater would occur for every year for at
20 least the next hundred years. We looked at two
21 containment alternatives, and a part of that
22 alternative includes institutional controls I just
23 mentioned. The two alternatives that were
24 evaluated were containment with an engineered cover
25 and containment with a native soil cover. If you

1 put up the next slide, I will show you. This is a
2 schematic of those two cover designs. You can see
3 that we have our contaminated media or soil here.
4 That cover consists of gravel and cobbles and a
5 gravel series and then covered by a larger basalt
6 rip rap.

7 You'll notice that the objective of
8 this cover design was not to prevent migration of
9 water through this soil because we've modeled that,
10 and the contaminants in the soil at the TRA just
11 aren't going to make it to the aquifer given
12 infiltration out at the desert.

13 The purpose of this design is to
14 prevent someone or something from digging down into
15 that soil and perhaps becoming exposed due to that
16 digging or bringing that contaminated material up
17 to a point where somebody else can be exposed. The
18 same basic purpose for this native soil cover. You
19 can see we have a contaminated area here on top.
20 We have about ten feet of clean native soil that
21 would be placed over the area, and we would put
22 some kind of a vegetative layer on top. But,
23 again, the purpose is not to prevent water from
24 migrating through because that is not going to be a
25 problem. The problem is someone getting exposed to

1 that, so we want to somehow put this cover on there
2 so that people cannot dig through it.

3 MR. HOWARD: What designs are they
4 leaning to use, leaning toward?

5 MR. OWEN: Nolan will go into that
6 for each one of the sites in the next part of his
7 presentation. But in general, we will be using
8 both of them in a couple places.

9 Excavation, Treatment and Disposal,
10 is primarily an alternative that was evaluated for
11 those sites that have the mercury. And particularly,
12 the Chemical Waste Pond would consist of excavating
13 the contaminated soil that would have to be
14 treated, and the treatment process would be a
15 mercury retort system, which essentially
16 volatilizes the mercury away from the soil and
17 separates it that way. Then the last alternative
18 was Excavation and Disposal. It would just consist
19 of excavating the contaminated material and
20 disposing of it appropriately at some location. It
21 could be off-site or on-site. That hasn't been
22 determined yet.

23 I think I've hit everything that I
24 was meant to say. So with that, I'll turn it
25 back to Nolan, and he'll go over the preferred

1 alternatives for each of the sites that you were
2 asking about.

3 MR. JENSEN: I'm going to use this
4 slide to talk about each these sites quickly and
5 explain actually what we want to do about each one
6 of them, and then I'll kind of point back and
7 forth. Let's do the Warm Waste Pond picture right
8 now.

9 This is the Warm Waste Pond again.
10 It's probably one of the more significant concerns
11 out there. This is a picture of what is left of
12 the Warm Waste Pond. Obviously, it's not a pond
13 anymore because we put the soil cover over it, but
14 that soil cover is not adequate for a very
15 permanent remediation or cleanup. So now what we
16 intend to do is go back and put a final cover over
17 that.

18 I'm going to put the other slide on.
19 This is the type of cover that we intend to put on
20 the Warm Waste Pond. Again, we're not worried
21 about the water itself percolating into the waste.
22 What we're concerned about is keeping the waste so
23 that the dust can't blow it around, so that no one
24 is digging into it and that kind of thing. So this
25 kind of cover would go on this pond.

1 The next pond is the Cold Waste
2 Pond. And in this case we're not intending to do a
3 cover; that is this pond right here. What we
4 intend to do here is to excavate the contamination
5 and dispose of it. Most likely what we would do is
6 take the contaminants out of here, put them in the
7 Warm Waste Pond area underneath the final cover
8 before we put that cover on.

9 The next one is the Sewage Lagoon.
10 There are actually two of them, one here and the
11 other one is right over to the side of it. That is
12 these two little areas right here. In this case,
13 we would intend to put a soil cover over them,
14 which is this type of soil cover. The contaminants
15 in that pond are extremely low. They will decay
16 away probably within about hundred years. So this
17 cover is intended mainly to keep that stable for
18 that amount of time.

19 This is the Chemical Waste Pond, and
20 it's this one right up here. And what we would
21 intend to do here is to excavate the contaminants
22 that need to be excavated and then dispose of them
23 properly. As Adam mentioned, mercury is a
24 contaminant of concern here. And any mercury we
25 find that is at a level that requires treatment, we

1 would treat it also before we did the disposal.
2 And then also we will go back after we clean out
3 the contaminants and put a soil cover there.

4 Now, we're going to talk about these
5 three sites in here. Again, not very photogenic,
6 but what there is here is this sign shows that
7 there is an area of surface soil contamination out
8 here. It's not very high, in about a hundred
9 years it should decay within safe levels. So our
10 proposal at all three of these sites, actually, is
11 to maintain the controls, basically just make sure
12 that nobody can get near them and be exposed.

13 The next two sites, this one is the
14 Brass Cap Area that the photograph is of, and then
15 some other hot waste tanks. If you look right
16 here, we call it the Brass Cap Site because there
17 is a little brass cap right there commemorating an
18 event several years ago where a pipeline underneath
19 the concrete leaked and caused some soil
20 contamination.

21 This site there has some underground
22 storage tanks back in here. Again, the piping is
23 associated with where those tanks leaked. In both
24 of these cases, because those sites are associated
25 with ongoing operations and we can't get in there

1 and dig them up yet, we're proposing again that we
2 maintain control of those sites so no one is
3 exposed.

4 Then in the proposed plan it talks
5 about a contingency, the reason we say that is
6 because at any time in the future that those
7 systems are shut down and we can get into them,
8 then we would go in and excavate the material that
9 is contaminated and dispose of it. But right now
10 we just can't get to it. It's possible that those
11 systems could be shut down in the next couple of
12 years, but we're not sure on that yet.

13 This is just a slide summarizing
14 what the cost could be. Probably the best estimate
15 here is for the Warm Waste Pond, the engineered
16 cover; we've done three or four of those in the
17 last couple of years on other sites. So we have a
18 pretty good feel for that cost, and we're
19 estimating about \$4 million.

20 For these other sites, those are all
21 worst-case estimates, upper-boundary estimates.
22 And the reason that we say that is, for example,
23 the chemical in the Cold Waste Pond we assumed that
24 we would have to excavate the sediments from the
25 entire pond on the bottom, and we don't think that

1 we'll have to do that in actuality. We will
2 probably only have to take part of it out, but we
3 wanted to make sure that our estimate wasn't too
4 low. So in each of these cases the estimate may be
5 a little bit high. So the grand total is about
6 \$12 million as a worst-case estimate. And we also
7 estimated here what it would cost approximately
8 each year to make sure that those covers were
9 maintained properly, that the controls to keep
10 people away from the sites were adequately
11 maintained and also to continue to monitor the
12 groundwater contamination.

13 So if you assume these costs for
14 over a hundred years, add it to the \$12 million for
15 the actual clean up work, over a hundred-year
16 period, the grand total could be as much as
17 \$32 million.

18 Now, I'm just going to show you some
19 photographs. As we mentioned earlier, there are
20 47 out of the 55 sites that we don't believe need
21 any action at all. I will just show you about
22 six or seven slides of those types of sites. This
23 was a storage area where radioactive materials were
24 stored, mostly they were boxes, components from
25 their reactors, and there was soil contamination

1 associated with that. And that's being cleaned up,
2 so we don't believe any more action is needed
3 there.

4 This is an injection well, a well
5 that goes clear to the aquifer. And it was used in
6 the past for disposal of chromium-contaminated
7 water, but it's a monitoring well now, and the well
8 itself doesn't pose any threat. So, again, we
9 propose that no action is necessary on the well
10 itself.

11 This is what we call the Paint Shop
12 Ditch. It's the area where the people that worked
13 in this building painting different items in the
14 facility, they would -- back in the '50s and '60s,
15 they would dispose of paint thinners and paint
16 waste in this ditch. We have gone and sampled
17 that, and we found very low levels of
18 contamination, and, again, don't feel any action
19 is necessary there.

20 Again, this is one of the rubble
21 piles that we showed you earlier, and again, we
22 didn't find anything that we thought was
23 significant. This is kind of an interesting
24 story associated with this one. There is a line of
25 these pine trees. As you can see, there used to be

1 a tree right here. And when they pruned these
2 trees a couple years ago -- everything that they
3 take out of the facility is surveyed to make sure
4 that no radiation gets out of the facility, well,
5 clippings from one of these trees showed to be
6 contaminated. So we went back and found that this
7 tree here was contaminated. So we went in and
8 drilled some bore holes around the area. Of
9 course, they took the tree out and disposed of it
10 properly. But when we drilled the bore holes
11 around the area, we found extremely low levels of
12 contamination, so we don't believe any action is
13 necessary.

14 The only thing that we can figure
15 out is that one of the roots of the tree may have
16 tapped into an old abandoned line somewhere and
17 picked up that contamination. But, again, I think
18 we drilled three bore holes in the area. We also
19 took some samples over in this ditch, and we didn't
20 find hardly anything. Any questions so far?

21 MR. SMITH: That concludes the
22 presentation, the summary of this investigation.

23 And, Mr. Howard, for your
24 information, we just want to inform you that we've
25 received a request from a group of citizens for a

1 30-day extension. So the comment period has been
2 extended to May 9th, so that gives an extra 30 days
3 to put comments in.

4 With that, we will take all the
5 comments that we receive from the public -- both
6 verbal comments that were given at these meetings
7 and the written comments that we received in our
8 office. The agencies will review those comments as
9 they are writing their decision. Once that is
10 finalized, that should be issued sometime in the
11 fall of this year. And included in that document
12 will be a Responsiveness Summary, where any comment
13 received will be addressed. It will be
14 acknowledged and a response given. Following that,
15 it will take almost a year, I guess, to do the
16 remedial design and begin the remedial action. So
17 it will actually be in the field sometime in the
18 summer of 1998 to implement the remedy that is
19 selected by the agencies.

20 So with that, that is kind of a
21 broad overview of what this project has been all
22 about. Has there been anything that we need to
23 clarify or anything that you wish to, maybe, recall
24 a slide and go back into a little more detail in
25 any of those areas?

1 MR. HOWARD: No. I got one of those
2 books, and I kind of went through that in depth,
3 and went through it. So I agree with just about
4 everything. My greatest concern is the aquifer. I
5 understand the nuclear policy that we're going to
6 have to have nuclear power down the road, sometime
7 in America's future. I just hate to see so much
8 fighting over something that shouldn't be, like so
9 much dissatisfaction of people when they so are so
10 ill-informed on what is really going on. Yet, they
11 don't have the time themselves to inform
12 themselves, so they rely on other groups for their
13 information, whether the information is correct or
14 incorrect, that is what they base their opinions
15 on.

16 But I have put a lot of tanks in the
17 ground and covered a lot of tanks, and I can
18 understand how all this works, so I have no -- like
19 I say, my main concern is the aquifer. I think
20 everybody's concern that is here.

21 MR. SMITH: With that, would you
22 like that -- what you've just stated to be the
23 comment for the record or do you have other details
24 you would like to have included in the official
25 record?

1 MR. HOWARD: No, that's all I have
2 except so many people have so many opinions, but
3 when they have the opportunity to come and find out
4 firsthand, you can see the results. They're too
5 busy with whatever. But then I don't know, I just
6 feel -- I really feel, personally, that it is our
7 educational system. I mean, they have an educated
8 channel of thought that goes -- I mean, it does it
9 in the scope of the whole surrounding, it ensconces
10 a one train of thought.

11 And, I mean, I can see from the time
12 that I graduated from high school -- when I
13 graduated, I was prepared to handle a lot. Maybe I
14 could have stepped into about 15 different jobs. I
15 think -- in fact, I did, and I handled quite a few
16 of them quite well before I went on to college. In
17 fact, I went into the Navy and I got my Naval wings
18 by stuff that I had taken in high school. I
19 could remember when I was put under certain
20 circumstances.

21 But I just feel that we are so
22 inclined today to take somebody else's point of
23 view without getting to the facts and claiming they
24 are ours, whether it's truth or innuendos, and that
25 is why we're here today; you can see John Doe

1 Public.

2 MR. SMITH: Well, we appreciate the
3 thoughts that you have and some of the things that
4 you have reminded us of tonight. And we appreciate
5 you being here and having reviewed that document
6 several times.

7 If you don't mind, I would like to
8 talk to you afterwards about how this presentation
9 went because we'll be doing this tomorrow night.
10 And if there is something that you see that we
11 could do better, I would like you to give us an
12 opportunity to tell us what that might be.

13 MR. HOWARD: One thing, this is a
14 short synopsis. Like you say, you didn't go into
15 actual detail, but I think you are qualified on the
16 situation and you know the situation, I'm sure that
17 you will be able to handle all the questions.

18 In fact, I can't see -- my thinking,
19 I can't see any deep questions that they could come
20 up with except the aquifer, and that is what most
21 of the concern is. And I'm sure -- like I say,
22 I've put in underground drain systems, and I can
23 understand how they work. So it isn't a big
24 problem to me.

25 MS. UNDERWOOD: I would like to

1 clarify something since he expressed a concern with
2 the aquifer itself. One of the things that Nolan
3 and Adam -- you know, they did a good job of
4 explaining this filtration and the fact that it is
5 not really a concern for these particular sites and
6 the type of contaminant and concentration that
7 we're dealing with there.

8 But one of the things that is going
9 to be integrated into the design is we're going to
10 be doing things to promote surface drainage. So
11 even in modeling the worse case, conservative
12 modeling that was done with 10 centimeters per
13 year, that precipitation, I mean, is going to be
14 promoted away from the landfill cover itself, and
15 in that way, hopefully, we are promoting or
16 preserving the integrity of the cover over time.
17 So I don't know if that belies some of your
18 concerns with the aquifer or not, but that is part
19 of the thought.

20 MR. HOWARD: My concern for the
21 aquifer is we find that you read this group says
22 this, and most of this stuff that I run into is not
23 based on the full truth, but they use fear
24 tactics. And when people -- the risk factor to the
25 people is the fear factor; the greater the fear,

1 the higher the risk. That is their conception of
2 what goes on. Instead of being here and being
3 informed, here we agreed, and like I say, the fear
4 factor is a risk factor. Whether it is the truth
5 or not, but when we form that in your mind, then
6 you talk about mercury contamination -- my wife and
7 I have a mine down on Gordon Creek, below. Now, I
8 had the mercury content of some fish that was
9 running through the Placer Mine and was
10 800 percent above human consumption. And people
11 go down and eat the fish out of that.

12 So when we get to reality and have a
13 reality check, the best reality check is truth and
14 education -- find out what is going on.

15 MR. SMITH: Maybe one other quick
16 question might be, did you have an opinion or
17 feeling about the agency's recommendations to
18 continue monitoring the aquifer for, let's see,
19 I think it was the next 20, years when the
20 contaminants are expected to decrease to a point
21 where they wouldn't present a risk.

22 MR. HOWARD: I would say 20 years,
23 and then I would recommend that they monitor every
24 five years thereafter and as long as INEEL is out
25 there, just a safety precaution.

1 MR. OWEN: One of other projects is
2 a site-wide project is, in addition to the
3 facility's specific or WAG specific monitoring
4 programs that the site-wide launching program will
5 also pick up any ongoing long term -- and I don't
6 think long term has actually ever been quantified
7 on how long is long -- but long-term monitoring at
8 the INEEL for groundwater and soil and all that.
9 So there will definitely be programs in place to
10 keep an eye on things.

11 MR. JENSEN: You're right, as long
12 as INEEL is there, it will need to be done and
13 probably for a period of time after that.

14 MS. SMITH: I have a question about
15 aquifer. It's my understanding that there is some
16 contamination presently in the Snake River Aquifer
17 under the site, but -- and my figures might be
18 wrong, but water moves through the aquifer for
19 something like nine feet a year; is that right?

20 MR. OWEN: That is probably about
21 right. I'm not sure what the transitivity--

22 MR. JENSEN: Actually here it's
23 about four feet per day in some places. It's
24 pretty fast.

25 MS. SMITH: I remember reading

1 something at the Boise office, and what they said,
2 essentially, is that the contamination that is
3 there now is underneath the site itself, and that
4 by the time, in 20 years, that it's dispersed, it's
5 not going to be in the area yet, in the area with
6 consumption; is that right?

7 MR. OWEN: Yes, you're right. There
8 are a couple of natural processes that take place
9 when a contaminant is in groundwater. The basalt
10 underneath the site is a fractured basalt system,
11 and it acts much like a sponge. And you can almost
12 envision the aquifer as a sponge. A lot of people
13 envision the aquifer as this underground lake of
14 water. That is not the case at all. So the
15 aquifer -- or the basalt below the facilities acts
16 like a sponge, and each contaminant has a
17 definitive for one of two things. It would rather
18 be bound to the chemical structure of the soil or
19 it would rather be bound with the water. And there
20 is some chemical interaction there.

21 But cesium is good example. Cesium
22 would much rather be with soil than it would be
23 with water. It's very difficult to make it want to
24 go with water. So cesium doesn't move very
25 quickly; other contaminants move more quickly.

1 But regardless, I think our modeling
2 shows that through these natural dispersion
3 processes and radioactive decay, given the amount
4 that these contaminants move on a daily basis,
5 those processes will reduce those contaminants down
6 to a concentration where there won't be a problem
7 by the time they get downgraded to somebody who is
8 drilling a well and drinking the water. Did that
9 answer?

10 MS. SMITH: That is exactly what I
11 wanted to know.

12 MR. SMITH: I think for other
13 purposes, we can stay and talk longer, too, about
14 maybe reviewing this material and get your
15 feedback about how you felt the presentation went.
16 You can give us some pointers. But in terms of the
17 comment period, then, and seeing no other citizens
18 who have joined us for the meeting, then, I believe
19 that concludes the purpose of our meeting tonight.

20 MR. HOWARD: I would like to thank
21 you people for putting this on. It's very
22 important. It's very informative to me. And it
23 kind of disgusts me because we don't have more
24 people, especially out of a capital city. They are
25 the ones that always make the loudest noise.

1 MR. SMITH: Maybe a little
2 historical footnote would be, in this area, in the
3 southwestern area of the state, we have probably
4 sent out about 200 copies of the proposed plan, but
5 about 800 copies of a Fact Sheet were distributed
6 to people in this area, in Ada County, Boise City,
7 particularly because they have the highest
8 concentration of people that received these
9 materials. So I suspect that at least 800 people
10 have received this specific mailer talking about
11 the project along with the advertising. But we're
12 always open to new ways of doing this.

13 MR. HOWARD: What is your reception
14 back on the comments? Are they coming in?

15 MR. SMITH: To date we have received
16 three comments, written comments.

17 MR. JENSEN: One of those was the
18 request for an extension. It really wasn't a
19 comment.

20 MR. SMITH: Comments are due in at
21 some future date.

22 MR. HOWARD: I'm not nosey or
23 anything, what was the extension asked for?

24 MR. SMITH: Essentially to give a
25 group time to prepare, to technically review the

1 document and to have it reviewed by the authorities
2 of the group so that they would concur. And that
3 process just takes longer than the 30 days that we
4 had originally set for the comment period.

5 Okay. Why don't we conclude this
6 meeting, then, and we would still like to meet and
7 intermingle following, but we will release our
8 court reporter and give her a rest for the
9 evening. And I guess, for the record, we'll be
10 here for a little bit longer in case someone else
11 comes, and we can interact with them.

12 Again, thank you very much, and that
13 will end this meeting for tonight.

14
15 (Proceeding concluded.)
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1 STATE OF IDAHO)
2 County of Ada) ss.

3

4 I, N A N C Y S C H W A R T Z, a Notary
5 Public in and for the State of Idaho, do hereby
6 certify:

7 That said hearing was taken down by me
8 in shorthand at the time and place therein named
9 and thereafter reduced to computer type, and that
10 the foregoing transcript contains a true and
11 correct record of the said hearing, all done to the
12 best of my skill and ability.

13 I further certify that I have no
14 interest in the event of the action.

15 WITNESS my hand and seal this 9th day
16 of April, 1997.

17

18 *Nancy Schwartz*
19 Nancy Schwartz, Notary
 Public in and for the
 State of Idaho

20

21 My commission expires:
22 September 28, 1998

23

24

25